

Amendments to the Specification:

Please replace the title at the top of page 1 with the following amended title:

BRANCH INSTRUCTION FOR PROCESSOR WITH BRANCHING DEPENDENT
ON A SPECIFIED BIT IN A REGISTER

Please replace the paragraph beginning at page 2, line 1 with the following amended paragraph:

The hardware-based multithreaded processor 12 also includes a central controller 20 that assists in loading microcode control for other resources of the hardware-based multithreaded processor 12 and performs other general purpose computer type functions such as handling protocols, exceptions, extra support for packet processing where the microengines pass the packets off for more detailed processing such as in boundary conditions. In one embodiment, the processor 20 is a Strong Arm[®] (Arm is a trademark of ARM Limited, United Kingdom) based architecture. The general purpose microprocessor 20 has an operating system. Through the operating system the processor 20 can call functions to operate on microengines 22a-22f. The processor 20 can use any supported operating system preferably a real time operating system. For the core processor implemented as a Strong Arm architecture, operating systems such as, MicrosoftNT[®] real-time, VXWorks and μ CUS μ CUS, a freeware operating system available over the Internet, can be used.